

## TYPHLODROMUS NESBITTI WOMERSLEY REDESCRIBED (ACARI: PHYTOSEIIDAE)

By E. Schicha

Biological & Chemical Research Inst., Department of Agriculture, Rydalmere, N.S.W. 2116.

### Abstract

The male of *Typhlodromus nesbitti* from New South Wales, Australia, is described and illustrated for the first time. The female is redescribed.

### Introduction

Males and females of *Typhlodromus nesbitti* Womersley were found in large numbers on the bark of apple trees in neglected orchards and on neglected backyard trees during the years 1971 to 1974 at Bathurst, N.S.W. The species was also found occasionally on bark and leaves of Granny Smith apple trees in experimental orchards at Bathurst, where it was observed feeding on eriophyid and tydeid mites. The early stages remain unknown as attempts to breed the species were unsuccessful.

Womersley (1954) described the female of this species. Chant (1959) summarised Womersley's description without including additional features. In the present paper both sexes are dealt with in detail.

### Genus *Typhlodromus* Scheuten

*Typhlodromus* Scheuten, 1857, *Arch. Naturgesch.* 23: 111. Type species *T. pyri* Scheuten, 1857.

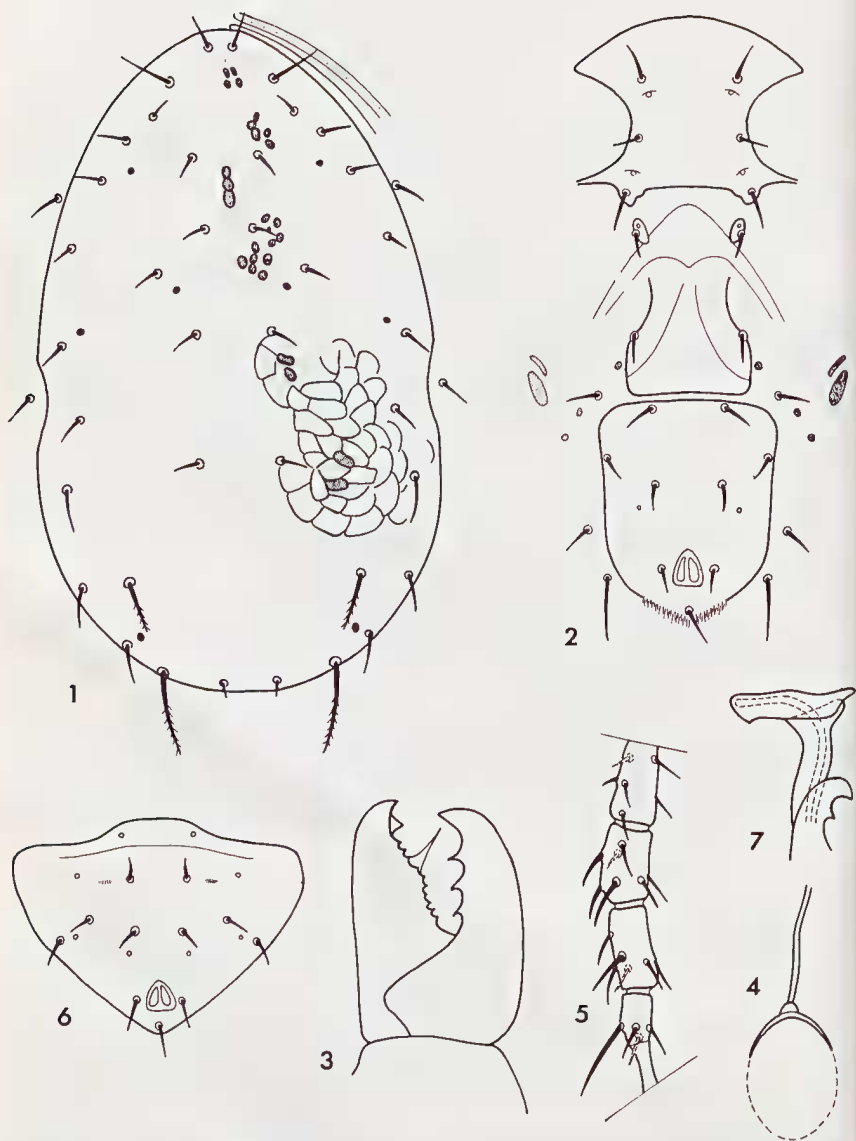
### *Typhlodromus nesbitti* Womersley (Figs 1-7)

*Material examined.* NEW SOUTH WALES: one ♀ labelled *Typhlodromus nesbitti* Womersley, from galls on tree lucerne, Goulburn, 7.vi.1934, in South Australian Museum, Adelaide (*holotype*). Twenty ♀♀ (T.ne. 1-20), and 6 ♂♂ (T.ne. 21-26), from bark of neglected apple tree, Bathurst, 21.iii.1972, E. Schicha, in Biological and Chemical Research Institute, Rydalmere.

### FEMALE

Measurements are the mean and standard deviation of 20 specimens in micrometres. Womersley's measurements are given in brackets.

*Dorsum.* Imbricated dorsal shield  $395 \pm 8$  long,  $236 \pm 10$  wide at L4, with 19 pairs of setae, six dorsal, two median, eleven lateral: D1  $22 \pm 3$  (28) long, D2  $14 \pm 1$  (17), D3  $14 \pm 1$  (17), D4  $16 \pm 1$  (17), D5  $17 \pm 1$  (20), D6  $11 \pm 1$  (11), M1  $15 \pm 1$  (17), M2  $34 \pm 3$  (36), L1  $24 \pm 3$  (20), L2  $13 \pm 2$  (20), L3  $22 \pm 3$  (22), L4  $21 \pm 2$  (22), L5  $23 \pm 2$  (25), L6  $22 \pm 2$  (25), L7  $18 \pm 1$  (20), L8  $27 \pm 2$  (28), L9  $22 \pm 2$  (22), L10  $21 \pm 1$  (22), L11  $58 \pm 2$  (56). M2 and L11 serrated, all other setae smooth. L1 longer than distance between its base and base of L2. L2 and L10 as long as, all other setae shorter than, distances between their bases and bases of setae following next in series. Four pairs of large pores. S1 and S2  $16 \pm 1$  (20), on interscutal membrane. Peritreme extending forward to base of D1 (Fig. 1).



FIGS 1-7. *Typhlodromus nesbitti* Womersley: (1) ♀ dorsum; (2) ♀ sternal, genital and ventrianal shield; (3) ♀ chelicera; (4) ♀ spermatheca; (5) ♀ leg IV; (6) ♂ ventrianal shield; (7) ♂ spermatodactyl.

*Venter.* Smooth sternal shield  $97 \pm 4$  long,  $115 \pm 6$  wide, with three pairs of setae and two pairs of pores near first and third pair of setae. Fourth pair of sternal setae on oval shields bearing anteriorly a pore each. Genital shield  $80 \pm 2$  wide, normal with pair of setae and straight posterior margin. Smooth pentagonal ventrianal shield  $132 \pm 4$  (143) long,  $113 \pm 4$  (110) wide, with three pairs of preanal setae and pair of preanal pores  $61 \pm 2$  apart (Fig. 2).

*Chelicera.* Fixed digit  $45 \pm 2$  long, with strong subapical tooth in addition to a series of 10 small teeth plus pilus dentilis. Movable digit  $51 \pm 3$  long, with three large subapical teeth, the posterior two pointing backwards (Fig. 3).

*Spermatheca.* Bowl-shaped (Fig. 4).

*Legs.* Macroseta on basitarsus IV  $43 \pm 1$  long (Fig. 5).

#### MALE

Dimensions listed are the range of three specimens in micrometres.

*Dorsum.* Imbricated dorsal shield 294-303 long, 159-167 wide at L4. Chaetotaxy of shield resembling that of female: D1 16-22 long, D2 13-14, D3 10-14, D4 13-14, D5 14-15, D6 8-11, M1 11-13, M2 29-31, L1 25-29, L2 12-15, L3 19-21, L4 17-21, L5 20-23, L6 18-20, L7 14-18, L8 21-24, L9 18-19, L10 18-20, L11 43-48, S1 and S2 17-19.

*Venter.* Ventrianal shield 130-132 long, 169-173 wide, with four pairs of preanal setae and three pairs of pores in addition to a pair of small preanal pores 43-45 apart (Fig. 6).

*Spermatodactyl.* With terminal heel, lateral process of foot (length 14-16) sharp. Toe rounded, with small tooth posteriorly (Fig. 7).

*Legs.* Macroseta on basitarsus IV 33-36 long.

#### Notes

The following observations were not made by Womersley (1954): idiosoma of female imbricated; M2 and L11 serrated; four pairs of large pores on dorsal shield. The holotype as well as slides T.ne.1 and T.ne.21 have been examined by Dr H. A. Denmark, Florida Department of Agriculture, Gainesville (U.S.A.) in 1974. The holotype has also been examined by Dr B. A. Wainstein, Borok, Nekouz, Jaroslavl (U.S.S.R.) in 1976. Both workers identified the respective specimens as *T. nesbitti*.

#### Acknowledgements

I am greatly indebted to Dr H. A. Denmark, Florida Department of Agriculture, Gainesville (U.S.A.) for assistance in the initial stages of this paper.

#### References

- Chant, D. A., 1959. Phytoseiid mites (Acarina: Phytoseiidae). Part II. A taxonomic review of the family Phytoseiidae, with descriptions of 38 new species. *Canad. Ent.* 91 Suppl. (12): 45-164.
- Scheuten, A., 1857. Einiges ueber Milben. *Arch. Naturgesch.* 23: 104-112.
- Womersley, H., 1954. Species of the subfamily Phytoseiinae (Acarina: Laelaptidae) from Australia. *Aust. J. Zool.* 2: 169-191.